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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,553	09/10/2003	Stanford R. Ovshinsky	FC-121	3076

24963 7590 07/22/2005

ENERGY CONVERSION DEVICES, INC.
2956 WATERVIEW DRIVE
ROCHESTER HILLS, MI 48309

EXAMINER

MEDINA SANABRIA, MARIBEL

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/659,553	Applicant(s) OVSHINSKY ET AL.	
	Examiner Maribel Medina	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. The drawings are objected to because: The identifier "Fig. 1" should be deleted. See 37 CFR 1.84 (u) (1) *"Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation "FIG." Must not appear."* Correction is required.

Specification

2. The disclosure is objected to because of the following informalities: IN page 8, line 14, "Figure 1" should be changed to --The Figure--; and In page 10, line 19, "Fig. 1" should be changed to --the Figure--.Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 5, 6, 8, 11, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 2 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 3, and the term "or" in line 4, should be changed to --and--.

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- b.* Claim 5 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 2, and the term "or" in line 4, should be changed to --and--.
- c.* Claim 6 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 2, and the term "or" in line 3, should be changed to --and--.
- d.* Claim 8 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 3, and the term "or" in line 4, should be changed to --and--.
- e.* Claim 11 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 2, and the term "or" in line 3, should be changed to --and--.
- f.* Claim 12 is indefinite for use of improper Markush language. The phrase --the group consisting of-- should be inserted after the term "from" in line 2, and the term "or" in line 3, should be changed to --and--.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the article Balema et al, Titanium catalyzed solid-state transformations in LiAlH_4 during high-energy ball-milling, *Journal of Alloys and Compounds*, v.313 pp. 108-114, (2001).

Balema et al disclose a reversible hydrogen storage material comprising and aluminum hydride such as LiAlH_4 and a catalytic material. The catalytic material can be any of TiCl_4 , Al_3Ti , Al_3Fe , $\text{Al}_{22}\text{Fe}_3\text{Ti}_8$ (instantly claimed Raney catalytic materials or hydrogen storage alloys). Regarding the instantly weight percentage claimed, Balema et al disclose an example in page 109 (See 3. Results and discussion) that the mixture comprises 97 %mol of LiAlH_4 and 3 % mol TiCl_4 , these values are equivalents to 3589 g LiAlH_4 and 564 g TiCl_4 which give a weight % of 86.6 and 13.6 respectively, therefore Balema et al meets the instantly claimed limitations. Regarding the claims directed to the method of making, Balema et al disclose that the hydrogen storage material is prepared by mechanically mixing the respective powders. Therefore no difference is seen between the instantly claimed invention and Balema et al disclosure.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maribel Medina
Examiner
Art Unit 1754